GOVERNMENT OF INDIA
MINES
LOK SABHA

STARRED QUESTION NO:240
ANSWERED ON:14.03.2016
Aerial Survey for Minerals
Ering Shri Ninong

Will the Minister of MINES be pleased to state:

(a) whether any aerial surveys have been conducted to ascertain mineral wealth in the country and if so, the details and outcome thereof;
(b) whether such aerial surveys are sufficient in view of large scale demand for minerals in the country and if not, the corrective steps taken by the Government in this regard;
(c) the targets and achievements under the 12th Five Year Plan for various projects undertaken for Aerial Survey in the country including multi-sensor survey and heliborne survey during each of the last three years and the current year, project-wise;
(d) the steps taken to achieve the targets for such projects on time; and
(e) the allocation and utilisation of funds for various surveys during the said period?

Answer

(a) to (e) : A Statement is laid on the Table of the House.

STATEMENT REFERRED IN REPLY TO LOK SABHA STARRED QUESTION NO.240 REGARDING AERIAL SURVEY FOR MINERALS ASKED BY SHRI NINONG ERING FOR ANSWER ON 14TH MARCH 2016

(a): Yes, Madam. Geological Survey of India (GSI) is engaged in multi-sensor airborne geophysical survey activity since 1965 for exploration of mineral resources in the country. Under different projects, 22,36,081 sq.km area of India has been covered by airborne geophysical surveys by GSI, National Remote Sensing Agency and National Geophysical Research Institute till December 2015.

The data acquired through aerial survey has been instrumental in establishing basemetal resources in Rajasthan, Karnataka, Andhra Pradesh; radioactive anomaly zones in Andhra Pradesh; Kimberlite Clan Rock (KCR) bodies (source rock for diamond) in Chhattisgarh, Madhya Pradesh, Uttar Pradesh and Andhra Pradesh; groundwater prospect in Karnataka by GSI. Moreover, the data is of immense help in refining the existing geological maps, delineating structures and unraveling concealed geology.

The Council of Scientific and Industrial Research−National Geophysical Research Institute (CSIR-NGRI) has been carrying out sponsored airborne geophysical survey activity for various agencies such as National Mineral Development Corporation, a Public Sector Undertaking under Ministry of Steel, connected with diamond exploration and Atomic Minerals Directorate for Exploration and Research (AMDER) under Department of Atomic Energy (DAE), for uranium explorations during 2000 to 2016. Currently, CSIR-NGRI is carrying out sponsored heliborne multi-parametric geophysical work for AMDER connected with uranium exploration.

(b): In view of large scale demands for minerals in the country, there is a need to augment exploration through aero-geophysical surveys in areas which indicate potential. GSI is carrying out aerial surveys as per available resources and manpower. In addition, GSI is undertaking ground geological, geophysical and geo-chemical surveys for generation of baseline geoscience data and taking up various programmes for regional and detailed mineral exploration.

(c) to (e): The details of targets and achievements under the XII five year plan for various projects undertaken by GSI for aerial survey in the country including multi-sensor survey and heliborne survey during each of the last three years and current-year project wise are as follows:

Surveys by multi-sensor airborne survey:

Sl. No. Year Area Target Achievement
1. 2012-2013 West-Coast (Vengurla-Jamnagar)
40665 line km (Area 101662 km2) Nil
Surveys could not be carried out as the Avionics for Twin Otter Airborne Survey System (TOASS) was being upgraded.
2. 2013-2014
Daman - Jamnagar
(Western Continental Shelf of India) 28000 line km
(Area 70,000 km2) 35,568 line km
(Area 88,920 km2)
3. Chandrapur-Brahmapuri area, Maharashtra 14791 line km
(Area 7396 km2) 15420 line km (Area 7710 km2)
4. 2014-2015

Alwar-Neem ka Thana, Rajasthan;
Haryana and UP

51833 line km (Area 25916 km2)
Nil
Surveys could not be carried out as the agency for comprehensive operation and maintenance of TOASS on turnkey basis for 3 years was finalized during May 2015, and surveys could commence from November 2015
5. 2015-2016
Ratnagiri-Mumbai area, West Coast 10,735 line km
(Area 26,838 km2) 10,138 line km
(Area 25345 km2)
6. Marwar-Khetri block, Rajasthan; Haryana 49,265 line km
(Area 24,633 km2) 30,986 line km (Area 15493 km2)
till Feb. 2016,
Surveys still in progress

Surveys by Heliborne Geophysical Survey System (HGSS):

The HGSS was commissioned in the year 2014. Various equipments have been fitted onboard and the surveys will commence during the month of March, 2016. A target of 4381 line kms (6572 sq. kms) has been fixed for the year 2015-16.

GSI achieves its targets through timely preparation of pre-flight logistics like flight path plan, preliminary investigation of the proposed area, renewal of the required software licenses for processing of the software etc. GSI follows its Standard Operating Procedures (SOP) for the survey.

The expenditure of GSI under Survey & Mapping Scheme including expenditure for aerial surveys, during the XII Plan period is as below:

(in Rs. crores)
SCHEME
XII Plan Grant 2012-13 2013-14 2014-15 2015-16
BE FE AE BE RE AE BE RE AE BE RE AE*
Survey & Mapping 545.29 48.04 49.76 49.50 71.83 71.83 71.66 165.84 129.90 129.39 156.22 111.31 109.14

BE- Budget Estimate; FE- Final Estimate; RE- Revised Estimate; AE - Actual Expenditure
* Till February 2016